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ABSTRACT

Four steps should be taken in developing correct physical education programs for handicapped students. Assessment of student need is the first step. and a growing number of assessment instruments are available which provide information on basic locomotor skills and patterns and on physical and motor fitness. They are comprised of items that sample performance for specific age groups of nonhandicapped children and identify areas of below normal performance. After analyzing test results, the second step is to establish long-range goals and enabling objectives for individual students. Following identification of objectives, the physical educator is ready for the third step of determining which intervention strategy will prove most beneficial in enabling handicapped students to reach established goals and objectives. The fourth step of proper placement for handicapped students is crucial to the success of the physical education program. Five optimum placements should be available for students. Students who are performing to normal standards and can participate regularly should be permitted opportunities without modification or limitation, while students with permanent disabilities who can function without assistance, but with slight accommodation, should be mainstreamed into regular physical education classes with appropriate modification. Students with permanent disabilities who can function with some assistance and/or limitations should be mainstreamed with appropriate limitations and/or assistance from a qualified aide. An adapted physical education class is appropriate placement for students with permanent disabilities who also exhibit motor development delays that require remediation activities. Some students can benefit from participating with the regular class while also receiving additional assistance in the adapted physical education class. (JD)

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PROGRAMMING - TRANSLATING ASSESSMENT INTO ACTION

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At this point in time the need for sound assessment procedures is understood. We assess not just to meet the mandate of the law, but to provide: 1) information on present levels of functioning, 2) hard data on which to base our goals and objectives, 3) insight into which intervention strategy will help each handicapped individual reach his/her full potential, and 4) a rational basis for selection of appropriate placement. Each of these uses of assessment information will be discussed in this paper.

Information on Present Level of Functioning

Public Law 94-142 clearly states that to determine whether or not a handicapped individual is in need of special services, the decision must be based on an instrument or instruments that:

1) have been validated for the specific purpose for which it is used
2) are administered by trained personnel in conformance with the instructions provided by the producer
3) are selected and administered so as best to ensure that when a test is administered to a child with impaired sensory, manual or speaking skills, the test results accurately reflect the child's aptitude or achievement ... (except where those skills are the factors which the test purports to measure). (Federal Register, 1977)

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Fortunately, in physical education we have a growing number of assessment instruments that meet the test criteria. Included among these instruments are the Bruininks-Oseretsky Test of Motor Proficiency, Project I CAN and Project ACTIVE. Other instruments that show promise include Project UNIQUE, APEAS, and a test that has been less well publicized, AIMS (Assessment of

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Individual Motor Skills).

The Bruininks-Oseretsky Test of Motor Proficiency includes physical and motor fitness, perceptual-motor and fine motor items. Projects I CAN and ACTIVE include standardized criterion tests of basic locomotor skills and patterns and physical and motor fitness. Project UNIQUE tests several physical fitness parameters. APEASE is a screening tool that can be used to refer students to adapted physical education, and AIMS probes several areas of sensory systems, reflexes and sensory-motor integration areas.

These instruments, singly and collectively, are important to adapted physical education because they tell us whether a student is performing to standard in a wide range of motor performance areas. They are comprised of items that sample performance for specific age groups of normal children. If a handicapped child is not performing to an acceptable level, that child is in need of specific objectives and goals, the realization of which will enhance his/her ability to achieve motorically.

After testing, AAHPERD has suggested the rule of thumb to use in deciding whether to interpret the performance as within normal limits is, any score one or more standard deviations below the mean or below the 25th percentile should be interpreted as an area requiring special attention (American Alliance for Health, Physical Education, Recreation and Dance, 1980).

Goals and Objectives

Long-range goals and enabling objectives must be directly tied to our test results. They 1) should be written in observable, behavioral terms: 2) must establish conditions under which the behavior is to occur; 3) must establish a criteria for mastery of a specific task; and 4) must lie outside the child's present level of educational performance (Crowe, Auxter, and Pyfer, 1981).

The task of writing acceptable objectives is simple enough if we remember the observable behavior must be an action (to run, to hop, to throw). The conditions must include how the task is to be accomplished (with alternating arm/leg action, while stepping forward on opposite foot, etc.). The criterion of mastery is the number of times, distance, time it takes to cover a given distance, or percentage of times necessary. The last point, must be outside the child's present level of performance, simply means the student must not now be able to demonstrate the behavior.

After writing objectives, the adapted physical educator is ready to determine which intervention strategy will prove most beneficial in enabling the handicapped student to reach the long range goals and enabling objectives that have been established.

Determining Intervention Strategies

Selecting intervention strategies that prove to help handicapped individuals reach the set goals and objectives is one of the most difficult and complex tasks that faces adapted physical education. Each of us is necessarily biased by our experience with, and observation and understanding of handicapping conditions. If the handicapping condition is permanent such as amputation or, say, cerebral palsy, we use our ingenuity or a well-worn textbook to ascertain how to modify an activity so that the handicapped individual can reach the set objectives and goals. If, however, the condition involves a lessened level of functioning, and the person's anatomy is intact such as is the case with retarded or learning disabled students, decisions about how best to intervene are more difficult. The three interventions strategies most used in this country are: 1) general programming, 2) task analysis and d) developmental facilitation.

General programming is an intervention strategy that was widely used five to ten years ago, but has gradually been fading. When this strategy is used, regardless of what tests show, the teacher selects activities that are believed to be beneficial for all students. That is, the handicapped individuals are provided a wide variety of activities in the hopes that the combined results will yield some kind of positive gains. Teachers who use the general programming strategy sometimes employ a very indirect teaching method with a movement exploration and/or problem solving approach; others will use a very direct teaching method and rigorously structured activities. General programming is obviously a carry-over from regular physical education curriculum development strategies.

A more scientifically controlled intervention strategy that yields consistently positive results is a task analysis approach. With this strategy, functions, skills or patterns are analyzed to determine what the contributing parts to the whole are. Once the parts have been determined, the pattern is observed for missing or inefficiently performed parts. Those parts found to be inefficiently performed or missing, are directly taught. In the best task analysis models, prompting cues and motivation techniques are incorporated into the teaching method and progress is carefully charted. In some cases teachers do their own task analyses; in other cases the well-developed Project I CAN or Project ACTIVE materials are used. Good task analysis users combine the best we know about kinesiology, exercise physiology and teaching methodology.

A third intervention strategy that is gaining in popularity in this country might be called the "developmental facilitation" approach. The emphasis in this strategy is to probe functioning levels of sensory systems, sensory-motor integration processes and motor performances in an attempt to determine specific neurological developmental delays which may underlie broad

categories of motor performance. Two different probing techniques, specific or broad, are used.

When one uses a specific probing technique a general test for motor function such as the Bruininks-Oseretsky or selected criterion items would be administered. Any areas or specific tasks yielding low scores would become suspect, and additional criterion tests would be given to try to determine whether specific contributing sensory systems or integration processes also test low. Those underlying areas found to be deficit would be assumed to be "developmentally delayed," and an intervention program designed to facilitate development of the specific underlying neurological components would be implemented.

When the broader probing technique is used, a large battery of tests that are believed to assess specific neurological components and processes underlying movement is administered. Once those data are gathered, they are organized into a hierarchal sequence beginning with sensory input components, progressing through sensory-motor integration processes and commencing with motor output behaviors. The findings are studied to determine which componets appear to be delayed. When programming from such data, activities to facilitate delayed sensory-motor integration processes are initiated. When the integration processes become fully functioning, then the motor output behaviors such as skipping, throwing and catching are given attention, if attention is still needed. That is to say, reports from clinics where these strategies have been used, often indicate that once the sensory input and integration processes have been facilitated, motor output performances emerge with little or no direct teaching (Seaman and De Pauw, 1977, and Pyfer, 1981).

It should be fairly obvious that teachers and/or clinicians who use the "developmental facilitation" strategy not only must be well- schooled in

kinesiology, exercise physiology and behavior management, but also must have a thorough understanding of developmental sequences and neurology. Also, it must be pointed out that although some of the neurological evidence upon which this strategy is based has been proven sound, some is still theoretical and awaits validation.

After assessment has been completed, long-range goals and enabling objectives have been developed and agreed upon, and a physical activity intervention program to realize these goals and objectives has been decided upon, which physical education placement would prove most beneficial must be determined.

Selection of Appropriate Placement

No matter how successful we have been in selecting an appropriate evaluation instrument, administering the instrument reliably and objectively, interpreting the results so that appropriate behaviorally stated long-range goals and objectives are selected, and picking an intervention strategy that will yield positive results, the biggest challenge of all is to figure out a way to deliver our programs so that each child's individual needs are met. The law speaks to this point when the term "least restrictive environment" is used. Least restrictive environment simply means placing each handicapped student into a learning situation that will enhance the possibility that the student's long-range goals and objectives are met. Which environment would be least restrictive should be decided after reviewing: 1) the unique needs of each child as determined through the assessment procedure; 2) size of the regular physical education classes; and 3) assistance available to the teacher of the physical education class.

In general, the greater a child's physical deficiencies, the more important placement in a special (adapted) physical education class that

can focus on each individual student. The fewer and less restricting the physical deficiencies, the more apt the child can be mainstreamed. When the child is mainstreamed, size of regular physical education classes will dictate how much assistance a handicapped child can reasonably expect. It is generally agreed that, in most cases, physical education classes with over 30 students permit little time for attending to the unique needs of one child. The younger the children, the truer this becomes. Children in kindergarten, first and second grade require far more individual attention than do children in fourth, fifth and sixth grade. Physical education classes that exceed 30 students simply do not permit the teacher the luxury of providing much individual attention to one or two needy children. In addition, children with limitations such as being confined to a wheelchair often require the constant assistance of an aide when participating in physically active classes. Aides should be made available to those children who require rather consistent assistance. Giving another student in the class the responsibility for a handicapped student should only be considered when the normal student is old enough to assume such responsibility and it does not interfere with the normal student's full participation in physical education activities.

The optimum physical education placement would be that setting which permits each child to make reasonable progress toward long-range physical education goals. Suggested guidelines for appropriate physical education placement for handicapped students are outlined in Figure 1. An explanation of each of these placements follows.

1. Regular Physical Education. Students who are performing to normal standards and can participate in regularly scheduled physical education classes should be permitted such opportunities without modification or limitation.

2. Modified-Regular Physical Education. Students with permanent disabilities (i.e., deaf, leg braces, educable mentally retarded) who can function without assistance but with slight accommodation should be mainstreamed into a regular physical education class with appropriate modifications. Whenever possible, the size of the physical education class should not exceed 30 students.
3. Limited-Regular Physical Education. Students with permanent disabilities (blind, epileptic, confined to a wheelchair) who can function with some assistance and/or limitations, should be mainstreamed into a regularly scheduled physical education class with appropriate limitations and/or assistance for a qualified aide. If well-trained aides with appropriate training can take entire responsibility for the handicapped student, and the child is in an upper (beyond third) grade, class size beyond 30 may be appropriate.
4. Adapted (Special)Physical Education. An adapted physical education class should be considered appropriate placement for students with permanent disabilities who also exhibit motor development delays (such as abnormal reflex development, subpar strength, limited flexibility) that require remediation activities to enable them to reach their long-range goals and enabling objectives, and students who are determined to have motor development delays that require remediation activities to promote physical functioning to the level that they can participate in regular, modified, or limited physical education class should include one teacher for eight students; however, there may be instances such as when working with students who have severe delays, when a one-on-one teacher-student ratio is necessary. But normally, never should class size exceed a 1:15 ratio

(Daniels and Davies, 1975). The adapted physical education class should always be organized for instruction so that each child can progress toward his/her individual goals and objectives.

5. Combination. There are some instances when students can benefit from some combination of the above plans. That is, a student might be able to participate with the regularly scheduled physical education classes some or all of the time, but also receive additional assistance in the adapted physical education class.

The most important criteria for physical education placement is need as determined by assessment results, long-range goals and enabling objectives, selected intervention strategy, and available assistance.

In schools where qualified occupational and physical therapists are available, consultation concerning function of students and assistance with intervention programming should occur regularly. When students need services beyond the adapted physical educator's capability, therapies should be used to augment and facilitate the motor development goals.

Adapted Physical Education is a more vital part of the school curriculum than has ever been true in our history. We have standardized test instruments, people trained in their use and interpretation, some well established and some promising emerging intervention strategies, and a placement plan that should permit maximum return on our investments. We are ready to act now.

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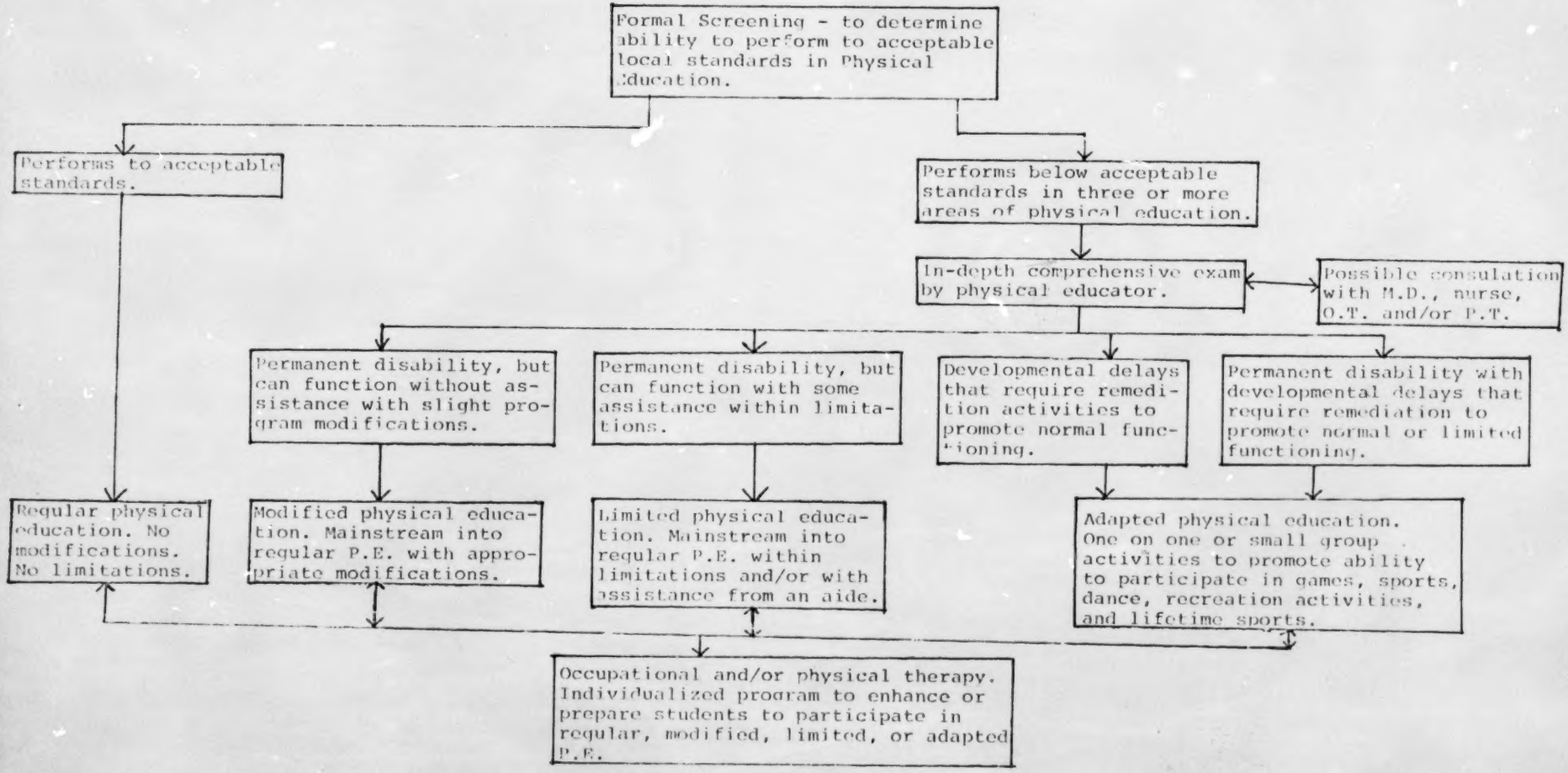
DELIVERY SYSTEM FOR PHYSICAL EDUCATION

FOR HANDICAPPED STUDENTS


Formal Screening - to determine ability to perform to acceptable local standards in Physical Education.
Performs to acceptable standards.
Performs below acceptable standards in three or more areas of physical education.
In-depth comprehensive exam by physical educator.
Possible consulation with M.D., nurse, O.T. and/or P.T.
Permanent disability, but can function without assistance with slight program modifications.
Permanent disability, but can function with some assistance within limitations.
Developmental delays that require remediation activities to promote normal functioning.
Permanent disability with developmental delays that require remediation to promote normal or limited functioning.
Regular physical education. No modifications. No limitations.
Modified physical education. Mainstream into regular P.E. with appropriate modifications.
Limited physical education. Mainstream into regular P.E. within limitations and/or with assistance from an aide.
Adapted physical education. One on one or small group activities to promote ability to participate in games, sports, dance, recreation activities, and lifetime sports.
Occupational and/or physical therapy. Individualized program to enhance or prepare students to participate in regular, modified, limited, or adapted P.E.